

## ABSTRACT OF THE DISCLOSURE

Los Angeles #:37157v1 / #57537v3

Unitary	Matrix	Order	Trace	Determinant	Eigenvalues	Character
$U_1$	$\begin{pmatrix} 1 & 0 \\ 0 & 1 \end{pmatrix}$	2	2	1	1, 1	1
$U_2$	$\begin{pmatrix} 1 & 0 \\ 0 & -1 \end{pmatrix}$	2	0	-1	1, -1	1
$U_3$	$\begin{pmatrix} 1 & 0 \\ 0 & i \end{pmatrix}$	4	0	i	1, i, -1, -i	1
$U_4$	$\begin{pmatrix} 1 & 0 \\ 0 & -i \end{pmatrix}$	4	0	-i	1, -i, -1, i	1
$U_5$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{i\theta}$	$1, e^{i\theta}$	$1 + e^{i\theta}$
$U_6$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{-i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{-i\theta}$	$1, e^{-i\theta}$	$1 + e^{-i\theta}$
$U_7$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{i\theta}$	$1, e^{i\theta}$	$1 + e^{i\theta}$
$U_8$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{-i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{-i\theta}$	$1, e^{-i\theta}$	$1 + e^{-i\theta}$
$U_9$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{i\theta}$	$1, e^{i\theta}$	$1 + e^{i\theta}$
$U_{10}$	$\begin{pmatrix} 1 & 0 \\ 0 & e^{-i\theta} \end{pmatrix}$	$\infty$	$2\cos\theta$	$e^{-i\theta}$	$1, e^{-i\theta}$	$1 + e^{-i\theta}$